

1.0 EXECUTIVE SUMMARY

1.1 Introduction

GWF Energy LLC (GWF) is seeking approval of an Application for Certification (AFC) from the California Energy Commission (CEC) for the construction and operation of the Henrietta Peaker Project (HPP). GWF proposes to build and operate the HPP, a nominal 91.4-megawatt (MW), simple-cycle power plant, on a seven-acre fenced site within a 20-acre parcel in unincorporated Kings County, California. Figure 1-1 shows the regional location of the HPP site. Figure 1-2 shows the immediate site location approximately 20 miles southwest of Hanford. The HPP will consist of the power plant, an onsite 70-kilovolt (kV) switchyard, and approximately 550 feet of new 70-kV transmission line.

One of the primary goals of the HPP is the rapid introduction of new, more efficient, and environmentally superior power generation to meet California's growing power demand. For the next three years, California is expected to experience a shortfall in available electric generating sources during periods of peak demand. The HPP is being developed on a fast-track schedule to help satisfy this power shortage.

The HPP offers the following environmental and economic features and benefits:

- Use of natural gas, a clean-burning fuel, and state-of-the-art air pollution controls to minimize air emissions.
- Use of aqueous ammonia, rather than anhydrous, to reduce the potential for hazardous materials exposure.
- Emission offsets for nitrogen oxides (NO_x), volatile organic compounds (VOCs), sulfur dioxide (SO₂), and particulate matter (PM₁₀) that are in excess of HPP emissions, which creates a net air quality benefit to the region. VOC and SO₂ offsets are being provided even though none are required by local regulations.
- Location of the HPP adjacent to the existing Henrietta Substation minimizes the length of the electrical interconnection (approximately 550 feet) and eliminates associated environmental impacts.
- Use of existing rights-of-way for a significant portion of the natural gas supply pipeline and a water supply connection with minimal linear facility length.

- Use of existing GWF personnel to operate and maintain the HPP to minimize impacts on local infrastructure.
- Help to reduce an anticipated power shortfall in California during the summer of 2002 and beyond.
- Addition of approximately \$900,000/year in local property tax revenue accruing to Kings County, and the addition of \$2.1 million in local spending for goods and services required for construction. In addition, approximately \$32,000 will be spent annually on local goods and services required for HPP operation.

This AFC provides:

- A description of the project
- A description of the project's need conformance
- A description of the project alternatives
- A description of the electric transmission system interconnection, natural gas supply, and water supply
- An assessment of the project's likely impact on the environment
- The proposed mitigation measures to ensure that environmental issues are properly and responsibly addressed
- Compliance with applicable laws, ordinances, regulations, and standards (LORS)

A list of contributors to this AFC is provided in Appendix M.

1.2 Project Ownership

GWF Energy LLC will construct, own, and operate the HPP. GWF Energy LLC is 50 percent owned by PSEG California Corporation and 50 percent owned by Harbinger GWF LLC. PSEG California Corporation is owned by PSEG Global USA Inc. Harbinger GWF LLC is owned by Harbert Cogen, Inc. Since 1989, GWF Power Systems, a subsidiary of PSEG Global USA Inc. and Harbert Cogen, Inc., has constructed, owned, and operated six small, solid-fuel power plant/cogeneration facilities in California with a combined generating capacity of 125 MW. Five of these plants are located in Contra Costa County and one is located in Hanford,

California. Electricity produced by the proposed HPP will be sold under a contract from the California Department of Water Resources (DWR).

1.3 Demand Conformance

The California legislature enacted Senate Bill 110, which, as of January 1, 2000, did away with the integrated assessment of need and with the specific requirement of former Section 25541 of the Public Resources Code to show that a project's generating capacity not be substantially in excess of the resources shown in the integrated assessment of need. The AFC for the HPP is being submitted in response to the state's critical electricity supply shortage and is consistent with the governor's recently signed executive orders (EO). EO D-26-01 and EO D-28-01 direct the CEC and other state and local agencies to expedite review of new power generating facilities. The purpose of this project is to help relieve the state's power shortages.

1.4 Project Schedule

The HPP will be constructed on a schedule of approximately five months following issuance of the AFC by the CEC. Construction is anticipated to commence in January and be completed in May 2002, with commercial operation anticipated by June 2002.

1.5 Facility Location and Description

1.5.1 Facility Location

The HPP site is located in the southwest quarter of Section 34, Township 19 South, Range 19, East Mount Diablo Base Meridian on Assessor's Parcel Number 027-190-065, as shown on Figure 1-2. The HPP site is on the eastern side of 25th Avenue, approximately one mile south of State Route (SR) 198 and directly south of and adjoining to the Pacific Gas and Electric Company (PG&E) Henrietta Substation. The power plant area will be accessed via a plant entrance and exit on 25th Avenue (see Figure 1-2 and Figure 2-3).

The HPP site location is limited by (a) the need to be located in an air basin where GWF has existing emission reduction credits (such as the San Joaquin Valley Air Pollution Control District), (b) the definition of "minor source" under federal air quality regulations to

qualify for expedited permitting, (c) requirements of a fast-track development schedule to meet a June 2002 commercial operation date, (d) the ability to interconnect at a major substation on the North Path 15 in Kings County (where GWF has an existing facility) that has adequate capacity and provides wide access to the electricity market, (e) the ability to connect to a natural gas supply with adequate capacity, and (f) the provisions of an existing DWR power purchase agreement. Prior disturbance, compatible land use, land ownership, proximity to natural gas supply, and transmission interconnection points are other key criteria considered in the site selection.

Section 6.0 (Electric Transmission), Section 8.4 (Land Use), and Appendix D provide more information on land ownership, including the assessor's parcel numbers and property owners' names and addresses, for all parcels within 500 feet of the transmission and water supply lines and within 1,000 feet of the HPP site.

1.5.2 Facility Description

The HPP will consist of the nominal 91.4-MW simple-cycle power plant, with a 70-kV switchyard and approximately 550 feet of new 70-kV transmission line. The new transmission interconnection will be to the existing PG&E Henrietta Substation, which is to the north of and contiguous with the project site. Natural gas for the facility will be delivered via approximately 2.2 miles of new 12-inch pipeline that will connect to the existing Southern California Gas Company (SoCalGas) Line 800 transmission pipeline, approximately one mile south of the intersection of 25th Avenue and the Avenal Cutoff. Westlands Water District and Kings County will supply water to the HPP from an existing Westlands Water District line via a 16.5-foot interconnection immediately adjacent to the HPP site on 25th Avenue. An approximately five-acre area within the 20-acre parcel will be used for construction laydown and parking. Figure 1-1 shows the regional location of the HPP site. Figure 1-2 shows the immediate site location of the HPP, including the proposed generating facility and proposed transmission, water supply, and access routes.

The HPP will use two General Electric LM6000 PC Sprint combustion turbine generators (CTGs), each with a base load nominal output of 46.9 MW at annual average conditions. The annual average conditions for the HPP site are assumed to be 63 degrees

Fahrenheit (°F) and 60 percent relative humidity. Each CTG will be equipped to burn only natural gas and will have an evaporative cooling system installed on the inlet air for use when the ambient temperature exceeds 50 °F.

Each CTG will be equipped with a selective catalytic reduction (SCR) emission control system that uses aqueous ammonia in the presence of a catalyst to reduce the NO_x concentration in the exhaust gases. The catalyst module will be located in a control system casing installed at the discharge of each CTG. Aqueous ammonia will be injected into the exhaust gas stream through a grid of nozzles located upstream of the catalyst module. The subsequent chemical reaction will reduce NO_x to nitrogen and water, resulting in a NO_x concentration of 3.6 or less parts per million by volume, dry (ppmvd) at 15 percent oxygen in the exhaust gas. An oxidation catalyst will reduce CO concentrations to 6 or less ppmvd at 15 percent oxygen, and VOC emissions to 2 or less ppmvd at 15 percent oxygen. In addition, GWF will provide offsets for NO_x, VOC, SO₂, and PM₁₀ emissions from the HPP. The VOC and SO₂ emission offsets are being provided as an air quality benefit, even though the reductions are not required by regulation.

Westlands Water District and Kings County will provide the plant's process water supply through an existing water line adjacent to the HPP site. Drinking water for the facility will be provided by a local bottled-water vendor. The plant will be a near-zero wastewater discharge facility. Small quantities (less than one gallon per minute) of process wastewater from the plant will be collected on site and periodically transported from the plant via licensed haulers for offsite recycle or disposal.

Figures 8.11-6 and 8.11-11 in Section 8.11 (Visual Resources) provide a near-field photograph and photo-simulation of the HPP site before and after construction, respectively.

The heat balance for power plant base load operation is shown in Section 2.0 (Project Description) on Figures 2-5, 2-6, and 2-7. The three cases are at 15, 63, and 115 °F.

1.5.3 Site Layout

Figure 2-3 in Section 2.0 (Project Description) illustrates the location of the HPP components; Figures 2-4a and b provide elevation drawings of the project components.

1.5.4 Transmission Interconnection

The CTGs will be connected to individual, dedicated, three-phase step-up transformers, which in turn will be connected to the plant's 70-kV switchyard. The switchyard will consist of an airbreak disconnect switch and SF6 circuit breakers. From the switchyard, the generated power will be transmitted along overhead lines into the PG&E substation adjacent to the facility. See Section 6.0 (Electric Transmission) for additional information on the switchyard, transmission line, and connection at the PG&E Henrietta Substation. Photo-simulations of the proposed HPP are shown in Section 8.11 (Visual Resources). As stated in Section 8.11, the proposed transmission interconnect is extremely short because the Henrietta Substation is directly north and adjacent to the site. Thus, the transmission interconnection will not likely be visible to most viewers.

1.5.5 Fuel Supply

The CTGs will be designed to burn natural gas. Maximum natural gas requirements during base load operation are approximately 20,400 million British thermal units (Btus) per day on a lower heating value basis.

Natural gas will be delivered to the site via a new 2.2-mile pipeline that will tie into the SoCalGas Line 800 along the Avenal Cutoff (see Sections 2.0 and 7.0). The natural gas will be delivered at a gas pressure of 290 to 400 pounds per square inch gauge (psig). The natural gas will be pressurized by onsite compressors, as needed, and then flow through gas scrubber/filtering equipment, a gas pressure control station, a fuel gas heater, and a flow metering station before entering the CTG.

1.5.6 Water Supply

HPP will not include a cooling tower and will therefore have a minimal water demand. The plant will require water for the CTG evaporative cooler, fire protection, plant general service, and domestic use. Bottled water will be used for drinking. The process water requirements will be met by Westlands Water District and Kings County. The water for HPP operation will be supplied under pre-existing contracts with the Westlands Water District (Central Valley Project entitlement) and Kings County (State Water Project entitlement); thus, the project will not exert an additional or new demand upon the California Aqueduct and is not projected to cause a significant impact on the respective water supplies of the two providers.

1.5.7 Waste Handling and Control

Solid waste generated at the HPP will include small quantities of paper from administration; absorbent materials, packaging, and used parts from operation; and chemical containers, demolition/construction wastes, and other specialized wastes from maintenance. Potentially hazardous waste will be generated during both construction and operation of the HPP. Hazardous wastes could include contaminated soil; waste oil, solvents, and paints; waste SCR and oxidation catalysts; and other maintenance wastes. Hazardous wastes will be minimized by recycling, to the extent possible. Hazardous wastes that are not recycled will be characterized and appropriately treated or disposed.

1.5.8 Site Access

The power plant area will be accessed via a plant entrance and exit on 25th Avenue (refer to Figure 2-3).

1.5.9 Facility Closure

The HPP will be designed for an operating life of 30 years. Closure procedures will follow a plan that depends on conditions at the time. Those conditions are largely unknown at this time, but closure could include maximizing recycle of facility components; return of unused chemicals to suppliers; equipment draining and shutdown to ensure public health and

safety and environmental protection; and the collection, recycling, or offsite disposal of all solid and hazardous wastes. Facility closure is further described in Section 4.0.

1.6 Plant Operation

The HPP will be operated by current GWF operations and maintenance personnel. Operators and maintenance staff will be dispatched from other GWF operating facilities as needed to operate the HPP. The facility will be capable of operating up to 8,000 hours per year.

GWF has executed a contract with the DWR that provides for 4,000 hours per year of dispatchable power sales. GWF is seeking a license to operate the plant up to 8,000 hours per year. GWF wishes to retain the flexibility to operate the plant for sale of electricity beyond the contracted hours, contingent upon demand requirements of the Independent System Operator–managed transmission distribution system. The project is expected to have an overall annual capacity factor of approximately 50 percent or more. However, the exact operational profile of the plant cannot be defined, because the facility will be operated to satisfy the demand of the state’s transmission distribution system.

Only the capacity that will be sold through the DWR contract can be accurately predicted. The contract allows DWR to purchase up to 4,000 hours per year of the HPP’s full generating capacity. It is anticipated that these hours of operation will normally occur during the periods of peak power demand. Operation outside of the contract will be a function of the prices offered for spot purchases; the exact extent of HPP operation beyond 4,000 hours per year cannot be determined. It is anticipated that any one CTG will either be operated at 100 percent load or will be shut down. Therefore, possible modes of operation include: both CTGs at 100 percent load, one CTG at 100 percent load, or full shutdown. To ensure that other potential operating conditions are evaluated, the operating performance at 60 percent load has also been included.

1.7 Safety

The HPP will be designed to maximize safe operation. Hazards that could affect the facility include earthquake, flood, and fire. Facility operators will be trained in safe operation, maintenance, and emergency response procedures to minimize the risk of personal injury and damage to the plant.

Safety and emergency systems will be incorporated into the design and construction of the facility to ensure safe and reliable operation. The HPP structures will be designed to meet 1998 California Building Code (CBC) Seismic Zone 3 requirements. The facility site will be located above the 100-year floodplain. Fire protection systems include both automatic and manual systems. Worker safety programs will be developed and implemented for both construction and operation to ensure compliance with federal and state occupational safety and health requirements.

1.8 Environmental Considerations

This AFC for the HPP addresses the following environmental resource issues in detail in Section 8.0 (Environmental Impact):

- Air Quality
- Biological Resources
- Cultural Resources
- Land Use
- Noise
- Public Health
- Worker Health and Safety
- Socioeconomics
- Agriculture and Soils
- Traffic and Transportation
- Visual Resources
- Hazardous Materials Handling
- Waste Management
- Water Resources

- Geologic Resources and Hazards
- Paleontological Resources

The HPP will avoid or substantially reduce potential environmental impacts to insignificant levels through project design and incorporation of proposed mitigation measures.

1.8.1 Air Quality

The HPP will result in a net regional air quality benefit based on the inclusion of state-of-the-art control technology and air emission offsets that are greater than the project emissions. In addition to the emission offsets required by regulation, GWF will voluntarily offset expected VOC and SO₂ emissions to ensure a net air quality benefit. The HPP CTGs will be equipped with Best Available Control Technology (BACT) to control criteria pollutant emissions. These measures include clean-burning natural gas, water injection for NO_x control, and effective combustion practices. In addition, the CTGs will be equipped with an aqueous-ammonia-type SCR and an oxidation catalyst.

Emissions sources during construction of the HPP include heavy equipment exhaust and fugitive dust from disturbed areas. Water will be routinely applied to minimize fugitive dust emissions.

Operational emission estimates were based on full-load operation of the CTGs and considered emissions from startup/shutdown events. The air dispersion modeling analysis was conducted to demonstrate that air emissions from the HPP will not cause or contribute to air quality violations or negatively affect visibility in Class I areas.

Air dispersion modeling indicates that NO_x, sulfur dioxide (SO₂), CO, and PM₁₀ impacts from the operation of the HPP are below ambient air quality standards. The modeling results for attainment pollutants (i.e., NO_x, CO, and SO₂) indicate that these pollutants will be well below their respective significance levels. A screening analysis concluded that the HPP will not significantly affect visibility. Both California and federal law require major sources of nonattainment pollutants in nonattainment areas to mitigate air quality impacts by providing emission offsets in the form of emission reduction credits (ERCs). The HPP will trigger offset

requirements for NO_x and PM₁₀ emissions. In addition, GWF will voluntarily provide ERCs for the project's VOC and SO₂ emissions. GWF has finalized agreements with owners of ERCs to meet the applicable offset requirements and will supply all the ERCs needed for the project.

1.8.2 Biological Resources

The HPP site is dominated by intensively managed agricultural activities. Natural vegetation is restricted to the farm equipment storage area just north of the plant site and to the banks of agricultural drainage sumps and canals. All of these areas are disturbed on a regular basis, and plants are predominantly weedy and non-native.

Biological surveys at the HPP site were conducted on April 20 and May 22, 2001 for listed and other special-status plant and animal species, following methodologies approved by the U.S. Fish and Wildlife Service and California Department of Fish and Game (CDFG, 1990). During the survey, all evidence of special-status species habitat was noted. There are no sensitive wildlife or plant resources at the site. No adverse environmental consequences are associated with the operations and maintenance phase of the HPP.

The Hanford Energy Park Peaker project recently qualified to be covered under the Kern Water Bank Master Incidental Take Permit to mitigate permanent disturbance to agricultural lands. The HPP is almost identical in scope and geographic location to the Hanford project, and coverage under the Kern Water Bank permit should apply. No CDFG 2081 permit is necessary because there is little or no chance for take of individual listed animals.

Measures contained in the HPP Biological Resources Mitigation Implementation and Monitoring Plan will reduce any potential impacts to a less-than-significant level.

1.8.3 Cultural Resources

The HPP will be located and constructed to avoid or minimize, to the extent possible, impacts to all cultural resources. To ensure that such resources are protected from damage, a qualified monitor will be available during construction activities to assess the nature and importance of any cultural materials discovered. Construction personnel will be trained to

recognize cultural materials and instructed to halt construction activities upon discovery of such materials. Thus, the HPP's impact on cultural resources will not be significant.

Prior to conducting the field survey of the HPP site, two record searches were performed at the Southern San Joaquin Valley Information Center of the California Historic Resources Information System. The record searches included all previously recorded cultural resources within 0.75 miles of the study area. The Native American Heritage Commission was contacted for information regarding heritage lands or resources in the study area. Systematic pedestrian surveys of the study area were completed in May 2001. Although no prehistoric resources were located during the survey, and no recorded prehistoric resources are known to exist within 0.75 miles of the HPP plant site and its linear facilities, members of the Native American community consulted for this project are aware of unrecorded sites within one mile of the project area.

No significant or potentially significant cultural resources are known to exist within the study area. It is possible that previously unknown cultural resources may be discovered in the course of the construction of the HPP. Construction personnel will be instructed to halt their activities if such materials are discovered. In the event of unanticipated discoveries of previously unknown cultural resources, a qualified archaeologist will evaluate the find for significance and, if necessary, recommend further mitigation measures.

1.8.4 Land Use

The proposed HPP will conform with local plans and regulations and is compatible with adjacent land uses in the project area. The HPP site is on a previously disturbed parcel within an intensive agricultural area. The proposed transmission line and natural gas pipeline will be built in existing transmission corridors or below existing roads, respectively. The proposed routes for the water supply line and access road run along or beneath existing dirt roads. All structures will be located near or along existing roads. Construction activities at the HPP site and along the proposed transmission and gas route corridors will be undertaken in a way that minimizes interference to adjacent land uses. Overall, the land use impacts associated with construction activities will not be significant.

The operation of the proposed facility is not expected to result in significant adverse impacts to surrounding uses. The HPP represents further development of an area already committed to energy-related uses. The HPP will not change the land use or alter the existing character of the area. Therefore, no significant land use impacts are identified.

1.8.5 Noise

Noise impacts from the proposed HPP were assessed by performing an ambient noise survey and modeling the expected construction and operational noise levels. The nearest residences are located approximately 1.5 miles northeast of the proposed plant's combustion turbines. With the proposed noise design elements incorporated, ambient noise levels at both the HPP site boundary and the nearest residences are below significant levels.

Noise levels from facility operation will be reduced by noise abatement features incorporated as standard equipment (e.g., acoustic enclosure and inlet air silencers for the CTG). Operational noise levels modeled for the proposed facility indicate that noise from project operations will be inaudible during all but the quietest periods. No significant noise impacts are expected from the operation and maintenance of the HPP plant, transmission line, or associated switchyard.

Noise impacts during construction will be typical of power plant construction activities, with the primary noise sources associated with heavy construction equipment and vehicles. To estimate construction noise impacts, a noise level composite was created based on noise monitoring conducted during the construction of 15 actual power plants. Using this modeling approach, construction noise is anticipated to be only faintly audible at the nearest residences. Construction equipment will have appropriate mufflers or silencers to reduce noise levels.

Offsite noise levels associated with the HPP are not expected to be significant or require further mitigation beyond the measures already identified and incorporated into the project.

1.8.6 Public Health

The HPP will utilize clean-burning natural gas and state-of-the-art combustion technology to minimize potentially toxic air emissions. The maximum incremental cancer risk from the CTG emissions will be well below the significance level at one in 1 million. For sensitive receptors, the maximum chronic “total hazard index” (THI) and the maximum acute THI are both well below the significance criterion of 1. Based on this evaluation, the HPP emissions are expected to pose no significant cancer or noncancer health effects. The health risk assessment performed for the HPP is based on a number of conservative assumptions and is likely to overestimate potential public health impacts.

Criteria pollutant emissions from the HPP will meet pertinent federal and state ambient air quality standards that have been set at levels designed to protect public health. Therefore, no significant adverse health effects from criteria pollutant emissions are anticipated.

Energized electrical conductors produce electric and magnetic fields at the transmission line that will drop off exponentially with distance away from the transmission line. Current knowledge on this subject indicates that the electric and magnetic field levels expected at the edge of the transmission line right-of-way will not present a health risk.

An offsite consequence analysis (see Section 8.12, Hazardous Materials Handling) demonstrates that in the unlikely event of an aqueous ammonia spill, there will be no significant impacts to the public.

1.8.7 Worker Health and Safety

The construction, operation, and maintenance activities associated with the HPP may expose workers to physical and chemical hazards. However, worker exposure to these hazards will be minimized through adherence to appropriate engineering design criteria, implementation of appropriate administrative procedures, use of personal protective equipment, and compliance with applicable health and safety regulations. Such practices are already in place at other existing GWF plants.

The HPP onsite fire suppression systems will be supported by the Kings County Fire Department, Station No. 7, located at 18th Avenue and Indiana, which is approximately 10 miles northwest of the facility. This location allows for a quick response time. The onsite fire suppression system will be placed in service as early as practicable. An emergency action plan will be developed to designate responsibilities and actions to be taken in the event of an emergency during construction of the facility. Additional written safety programs will include, but not be limited to, hazard communication standards, a hearing conservation program, a respiratory protection program, heavy equipment procedures, and hot work procedures.

Upon startup of the HPP, the construction health and safety programs will transition into an operation and maintenance program. The primary mitigation measures for worker hazards during normal facility operation and maintenance will be contained in the Injury and Illness Prevention Plan. Fire protection will involve physical measures, such as sprinklers, water supplies, and fire extinguishers, as well as fire prevention measures. The HPP will have a site-specific plan that addresses potential emergencies, actions, and responsibilities. Additional written safety programs will be developed as components of the overall operation and maintenance health and safety plan for the HPP.

The HPP will help provide a safe work environment for all workers participating in construction and operation of the project. Systems will be implemented to ensure that workers possess the necessary information to recognize hazards and protect themselves from hazards.

1.8.8 Socioeconomics

The HPP will increase fiscal resources in the region by increasing both sales tax and property tax revenues that accrue to Kings County. Construction income earned in the county will also increase. Operation income earned in the county will not change as a result of HPP operations, because additional workers will not be required.

HPP construction is expected to last five months and will provide short-term job opportunities. A sufficient supply of labor for this project exists through unions and contractors in Kern, Fresno, Kings, and Tulare Counties. The peak construction period for the HPP is not expected to overlap with the peak construction demands of other projects planned in the area.

Due to the availability of a large construction labor force, and to the small number of other projects within the county that will result in a substantial number of permanent new residents, the HPP is not expected to cause significant cumulative impacts.

The impacts associated with increased demand for resources due to HPP construction and operation are not anticipated to be significant or adverse. HPP construction and operation will not have a significant adverse impact on the ability of the county to provide law enforcement, fire and emergency medical services, utilities, or education services.

The environmental justice impacts of the project were analyzed, and the HPP will not have a disparate impact on minorities or low-income populations.

1.8.9 Agriculture and Soils

The HPP will not cause significant impacts to agriculture or soils. The HPP is located in an intensive agricultural area, where disturbance of soils has already occurred.

During excavation of the HPP site and before compacting and grading, the soils will have susceptibility to erosion. However, compacting and other construction mitigation measures will reduce the potential for erosion. With the exception of the seven-acre proposed facility, no agricultural land will be taken out of production as a result of the HPP.

Grading operations and construction activities will meet county and state grading requirements and stormwater best management practices.

1.8.10 Traffic and Transportation

The available capacity of the regional transportation system serving the Kings County area is sufficient to accommodate the traffic generated during the construction and operation of the proposed HPP. Due to the minimal increase in traffic during construction of the HPP, and the relatively uncongested traffic conditions along state routes and local roads in the project vicinity, the HPP will not result in significant traffic impacts.

There are no other known projects in the region whose workforce and/or material deliveries will concurrently use the same state routes and local roadways. Therefore, traffic impacts during operation of the HPP are also considered to be insignificant.

1.8.11 Visual Resources

Construction and operation of the HPP will not introduce elements into the local viewsheds that substantially differ in character from the adjacent Henrietta Substation. The HPP will not significantly obstruct or intrude on views or diminish the vividness, intactness, or unity of the local viewsheds. In addition, the activities associated with construction of the plant will be compatible with the existing industrial nature of the area and the presence of trucks and equipment. Therefore, the impacts from the HPP on the visual resources in the study area are considered to be less than significant.

1.8.12 Hazardous Materials Handling

The HPP will implement accident prevention and mitigation measures to reduce the risk associated with use and storage of hazardous materials. The quantities of hazardous materials stored or used on site will be evaluated to determine whether they exceed threshold levels for federal and state risk management and process safety requirements. Plans and programs are already in place at other existing GWF plants, and these programs will be adapted to the HPP. The current programs include hazard assessments, prevention programs, emergency response programs, and process management systems. Although risk cannot be completely eliminated, engineering and procedural features will effectively reduce the possibility and potential consequences of a release.

Hazardous materials at the HPP include insulating and lubricating oils, corrosion inhibitor, detergents, carbon dioxide, and aqueous ammonia, which will be used in the SCR system for NO_x control. The aqueous ammonia tank will be double walled, and the tank unloading area will drain to an underground containment structure sized to hold the entire contents of the delivery truck. The evaluation of plausible release scenarios indicates that the likelihood of a release is too small to be considered significant.

1.8.13 Waste Management

Nonhazardous and hazardous wastes generated by the HPP during both construction and operation of the HPP facility will be recycled to the extent possible. Typical wastes include process wastewater, nonhazardous solid and liquid waste, and hazardous solid and liquid waste. When properly handled, both nonhazardous and hazardous waste will not significantly affect the environment or human health.

Disposal of the nonhazardous waste generated by the HPP will not significantly decrease the capacity of the waste disposal facilities identified as available for use by the project. With active recycling efforts in place, and the currently available Class II or III waste disposal capacity, the incremental waste disposal capacity needed by the project is insignificant.

Similarly, the disposal of hazardous waste generated by the HPP will be minimized by recycling and will not significantly decrease the capacity of Class I hazardous waste disposal facilities used by the project.

1.8.14 Water Resources

Water for the proposed HPP will be supplied by Westlands Water District and Kings County under pre-existing contracts. Therefore, the project will not exert an additional or new demand upon State Water Project water and is not projected to cause a significant impact on local or regional water supplies from the California Aqueduct. Water for the site will be pumped from the Westlands Water District's standpipe (number 30380-30-935), which is located adjacent to the HPP site.

Best management practices and drainage control will be implemented, along with erosion and sediment control, to minimize surface water impacts during construction.

1.8.15 Geologic Resources and Hazards

The HPP will not adversely affect geologic resources of recreational, commercial, or scientific value. The HPP will be designed to conform with the requirements for CBC 1998 Seismic Zone 3. The surface and subsurface geologic units are not unique; the potential for

encountering rare minerals is very low. In addition, the HPP site has been previously disturbed by historic agricultural activities, and the transmission line, natural gas pipeline, and water supply pipeline routes are close to, or within, existing rights-of-way. No significant impacts to geologic resources are expected.

1.8.16 Paleontological Resources

The literature and archival reviews and the field survey did not identify any specific fossil localities that will be affected by the proposed project. Nonetheless, monitoring will be conducted to ensure that paleontological resources are not adversely affected by the earthmoving associated with construction of the HPP. Due to the high sensitivity rating of the formation underlying the proposed plant site and associated linear facilities, there is the potential for significant paleontological resources to occur below surface. Previously unidentified paleontological resources present on the plant site could be disturbed or destroyed during excavation activity. It is recommended that a paleontologist monitor the initial excavation activities and periodically inspect any deep excavation.

1.9 Cumulative Impacts

The incremental impacts of the HPP will not contribute to cumulative impacts, when viewed in connection with other existing projects or reasonably anticipated future projects in the area.

1.10 Summary

The proposed HPP will provide benefits to the local economy and will help the state meet projected electrical power needs. By employing advanced gas-fired combustion turbine technology, the HPP will create a highly efficient and environmentally superior source of electricity for entry into California's energy market in the early summer of 2002.

The impacts associated with the construction and operation of the HPP have been considered throughout the planning process. In instances where potential environmental impacts have been identified, mitigation measures have been proposed to lessen impacts to an insignificant level.

FIGURES